FY 2018-19 Standard Plans Update Training

Ed Cashman, P.E.
Standard Plans Engineer
State Roadway Design Office
(850) 414-4314
edward.cashman@dot.state.fl.us
Index 102-100 (previously Index 415)
“Temporary Barrier”

- This index is now generic to multiple types of temporary barrier systems.

1. Temporary concrete barrier systems on roadways may be any of the following:
   a. The FDOT Type K Temporary Concrete Barrier system (Design Standard Index 414). F-Shape Units. For temporary concrete barrier systems on bridges see Design Standard Index No. 414.
   b. Proprietary temporary concrete barrier systems meeting NCHRP Report 350 Test Level 3 criteria which are included on the Approved Products List.
   c. Water filled barrier (free-standing)

- “Deflection Space” is now “Setback Distance” and the previous table has been revised and simplified. Anchored “Setback Distance” was previously as low as 1’ and is now 2’.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>LATERAL OFFSET</th>
<th>SETBACK DISTANCE</th>
<th>PAVEMENT/ ASPHALT WIDTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchored</td>
<td>2' Min.</td>
<td>2' Min.*</td>
<td>1' Min.</td>
</tr>
<tr>
<td>Free-standing</td>
<td>2' Min.</td>
<td>4' Min.</td>
<td>4' Min.</td>
</tr>
</tbody>
</table>

* For Bridge Decks see Index 102-110 or APL.
Length of need has been removed from the index. See the Standard Plan Instructions for length of need calculations.
Crash cushion details have been moved to Index 102-110. See APL drawings for crash cushion details related to proprietary barriers.
Index 102-110 (previously Index 414)  
“Type K Temporary Concrete Barrier System”

- There are Index-wide revisions, but they are mostly minor and relate to the temporary barrier changes. Some information that was previously shown (e.g., setback distance) is now located solely in Index 102-100 “Temporary Barrier”.
- The fabrication details that were on sheets 1-3 of 15 are now shown on sheets 15-17 of 17.
- Significantly, added a “3-3-2-1 Anchorage Transition Detail” on sheet 1 of 17.
Revised Preface to General Notes along with the information contained therein.

PRE GENERAL NOTES:

All projects and works on highways, roads and streets shall have a traffic control plan. All work shall be executed under the established plan and Department-approved procedures. This Index contains information specific to the Federal and State guidelines and standards for the preparation of traffic control plans and for the execution of traffic control in work zones, for construction and maintenance operations and utility work on highways, roads and streets on the State Highway System. Certain requirements in this Index are based on the high volume nature of State Highways. For highways, roads and streets off the State Highway System, the local agency (City/County) having jurisdiction may adopt requirements based on the minimum requirements provided in the MUTCD.

Index 2. Indexes 102-601 through 102-670 are Department specific typical applications of commonly encountered situations. Adjust device location or number thereof as recommended by the Worksite Traffic Supervisor and approved by the Engineer. Devices include, but are not limited to, flaggers, portable temporary signals, signs, pavement markings, and channelizing devices. Comply with MUTCD or applicable Department criteria for any changes and document the reason for the change.

These 3. Except for emergencies, any road closure on State Highway System in order shall comply with Section 335.15, F.S.

Except for emergencies, any road closure on State Highway System shall comply with Section 335.15, F.S.

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

The Florida Department of Transportation has adopted the "Manual On Uniform Traffic Control Devices For Streets And Highways" (MUTCD) and subsequent revisions and addendums, as published by the U.S. Department of Transportation, Federal Highway Administration, for mandatory use on the State Maintained Highway System whenever there exists the need for construction, maintenance operations or utility work.
Removed Temporary Substitution of RPM’s for Paint or Removable Tape.

1. Paint or removable tape are the required work zone markings and shall be placed in accordance with the plans and specifications. If these work zone markings cannot be placed due to weather restrictions identified in the appropriate specification, temporary substitution of RPM’s for work zone markings will be allowed until the weather condition permits the placement of appropriate work zone marking. Temporary substitution of RPM’s for work zone markings will be allowed for equipment malfunction, placement of the appropriate work zone marking shall be made within 3 days, or sooner if possible. When RPM’s are used as a temporary substitution for work zone markings the following shall apply:

a. Lane widths identified in the plans must be maintained. Placement of RPM’s should consider where work zone markings will be placed as soon as conditions allow. If the RPM’s can not be placed so that the lane width is maintained after the placement of the work zone markings, the conflicting RPM’s must be removed.

b. The color of the RPM body and the reflective face shall conform to the color of the marking for which they substitute.

c. In work zones, B RPM’s must be used to form lane lines, edge lines and temporary gore areas as a temporary substitute for paint or removable tape at the spacing shown above.
Revised General Notes. Added another option for a 0.50 mile closure.

**GENERAL NOTES**

1. Temporary signals can either be portable signals or span wire signals and shall include two signal faces for each approach.

2. The installation and timing of signals shall be approved by the District Traffic Operations Engineer prior to signals being placed in operation.

   Where sight distance to the signal is limited, the temporary traffic signals may be relocated at the discretion of the Engineer. Timing adjustments must be made by the Work Zone Traffic Supervisor based on changing field conditions. Changes to timing (either reoccurring or lasting more than 24 hours) must be approved by the District Traffic Operations Engineer.

   Whether the signals are in automatic mode or being controlled manually, in no case will the distance between the portable signals (receivers/controllers) exceed the maximum distance at which the portable signals can be positively and safely operated in accordance with manufacturer’s recommendations. When distances between signals exceed 0.25 miles, a combination of a pilot vehicle with manually controlled temporary traffic signals are required.

3. Additional warning signs may be required to warn drivers of the Road Work Ahead.

4. The SIGNAL AHEAD legend sign may be substituted for the symbol sign.

5. SIGNAL AHEAD and EQUIPMENT CROSSING AHEAD signs are to be removed or fully covered when no work is being performed and the highway is open to two-way traffic. Type III Barricades shall be in place to block haul road access when the haul road is not in operation and a flagger/signal operator is not on duty, except when the haul road is an existing properly marked road.

6. Use Temporary Traffic Control Strips in accordance with Index 608.
Index 102-606 (previously Index 606)
“Two-Lane, Two-Way, Work Within the Travel Way – Signal Control”

- Removed “Reverse Curve” and “Keep Right” signs from all sheets.
Revised “General Notes”. The most significant change being shown below.

Revised “Sidewalk Diversion” detail to show temporary sidewalk instead of a diversion into the traveled way. A diversion into the traveled way is still allowed, but the feasibility is limited.
Index 546-010 (previously Index 518)
“Ground-In Rumble Strips”

- As part of the effort to remove design information from the Standard Plans, the “Shoulder Ground-In Rumble Strip Placement” detail has been removed and placed into the FDM 211.4.4. For the time being, the placement details are also described in the “General Notes”.

[Diagram of Shoulder Ground-In Rumble Strip Placement]
Index 546-010 (previously Index 518)
“Ground-In Rumble Strips”

- The concrete pavement details on the old sheet 2 of 2 have been removed. The “Rigid Pavement with Flexible Pavement Shoulder” detail has been incorporated into “Detail ‘A’” of the Standard Plan. The Profiled Thermoplastic criteria has been moved to FDM 211.4.4.2.
Index 665-001 (previously Index 17784) “Pedestrian Detector Assembly Installation Details”

- The entire Index has been reconfigured, but, in general, the content is the same.
- Removed sheet with sign details and pushbutton location details (old sheet 2 of 2).
Index 700-010 (previously Index 11860)
“Single Column Ground Signs”
Sheet 5 of 9

- Removed “Concrete/Stub Detail”.
- Revised “Driven Post Detail”.

---

**DRIVEN POST DETAIL**
(Frangible Post In Crossovers, Medians & Sidewalks)
Deleted 8’ (Max.) requirement.

Added 7’ (Min.) requirement for length of post from base connection to bottom of sign panel.
Index 700-101 (previously Index 17302)
“Typical Sections for Placement of Single & Multi-Column Signs”

- There are Index-wide changes for consistency, but most are relatively minor.
- Removed wrong way sign criteria out of the “Case II” detail and created a “Case X” detail specifically for wrong way signs.
Index 706-001 (previously Index 17352)  
“Typical Placement of Raised Pavement Markers”

- There are Index-wide changes, but most are relatively minor (e.g., “Reflective” to “Raised”, note changes, etc.).
- Two new sheets have optional RPM details for median openings, islands, and traffic separators that, if used, should be called for in the Plans.

**RPM PLACEMENT AT ISLANDS**  
(When called for in the Plans)

**RPM PLACEMENT AT TRAFFIC SEPARATORS**  
(When called for in the Plans)

**NOTES:**
1. For Type B Curved RPMs, install RPMs using the same spacing shown.
2. Direct traffic before RPMs, if required, and to be directed to direction of travel lanes.

**LEGEND:**
- B/C = BACK OF CURVE
- ESP = EDGE OF PAVEMENT
- ARM = RAISED PAVEMENT MARKER
- WM = WHITE/RED RPM
- YF = YELLOW/FIELD RPM
- YF/W = YELLOW/WHITE RPM
- YF/R = YELLOW/RED RPM
- P/YF = Bi-DIRECTIONAL YELLOW RPM

<table>
<thead>
<tr>
<th>INSTANT SPEED LIMIT</th>
<th>RPM FEET</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 MPH or Less</td>
<td>10</td>
</tr>
<tr>
<td>40 MPH</td>
<td>20</td>
</tr>
<tr>
<td>60 MPH or More</td>
<td>40</td>
</tr>
</tbody>
</table>
Index 711-001 (previously Index 17346) “Pavement Markings”

- There are Index-wide changes for consistency, but most are relatively minor.
- Two new sheets have been added to clearly show longitudinal markings.
Index 711-001 (previously Index 17346) “Pavement Markings”

- Removed the following details:
  - “Typical Crosswalk Markings for Curb Ramps” on sheet 6 of 17 (old)
  - “Restricted Left Turn Marking” on sheet 7 of 17 (old)
  - “Typical Intersection 2 Thru Lanes Plus Left Turn Lane, with Crosswalk” on sheet 7 of 17 (old)
  - “Stop Bars, Crosswalks and Double Center Line Details” on sheet 7 of 17 (old)
Index 711-001 (previously Index 17346) “Pavement Markings”

- Removed the “One-Way Signs on Divided Highway Intersections” detail on sheet 8 of 17 (old) placed it in FDM 230 as an exhibit.
- Removed the sheet with Midblock Crossing details (old sheet 13 of 17) and placed it in FDM 230 as an exhibit.
Removed the signing details from “Schemes for Transition – 2 Lane / 4 Lane Roadway” on sheet 9 of 17 (old) and placed them in FDM 230 as an exhibit.
Index 711-001 (previously Index 17346) “Pavement Markings”

- Removed sheet with exit number details (old sheet 10 of 17) and placed it in Index 711-003.
Index 711-001 (previously Index 17346) “Pavement Markings”

- Removed the following details from sheet 15 of 17 (old):
  - “Minimum Parking Restriction for Nonsignalized Intersections”
  - “Minimum Parking Restriction for Signalized Intersection”
- See FDM 212.11.5 for on-street parking at intersections.
Removed sheets with Profiled Thermoplastic details (old sheets 16-17 of 17). See FDM Figure 210.4.4 for the placement of audible and vibratory treatment.
Index 711-001 (previously Index 17346) “Pavement Markings”

- Added sheet with “Markings for School Zones” details (new sheet 14 of 14).

NOTES:
1. All grids are 4” x 4”.
2. Pavement Marking should not extend into opposing lane.
Index 711-002 (previously Index 17347) “Bicycle Markings”

- Removed sheet with “Shared Lane Markings” details (previously sheet 2 of 5). See FDM 223.3 for guidance on Shared Lane Markings.
- Removed sheets with bike lane typical layouts (previously sheets 4-5 of 5). See FDM 223 exhibits for updated bike lane typical layouts.
Index 711-003 (previously Index 17345)  
“Interchange Markings”

- There are Index-wide changes for consistency, but most are relatively minor.
- Revised the chevron spacing chart on sheet 1 of 1. All chevron spacing is now 60’.
Index 711-003 (previously Index 17345)  
“Interchange Markings”

- Added new sheet with an interchange intersection (sheet 6 of 7).
Index 711-003 (previously Index 17345)
“Interchange Markings”

- Added new sheet with exit number details (sheet 7 of 7).

**NOTES:**
1. This Index shows layouts for 1, 2, and 3 digit numbers and letters.
2. The message consists of white letters and numbers with black contrasting material.
3. The "EXIT NUMBER" position remains the same distance from the beginning of each regardless of the number of digits of information.
4. All letters are 4" high.
Questions

Ed Cashman, P.E.
Standard Plans Engineer
State Roadway Design Office
(850) 414-4314
edward.cashman@dot.state.fl.us